
DTI fault clearing

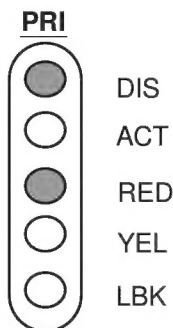
DTI status check

This status check is used to verify that the DTI card is working normally. It assumes the DTI hardware is properly installed (for example, correctly cabled) and operational. If the DTI status does not match the steps below, complete the check and proceed to DTI fault clearing procedures.

Note: The DTI interface requires a QPC472 DTI or QPC720 Primary Rate Interface (PRI) card. Since this document deals with DTI functions, both cards are referred to as the “DTI” card or “DTI” hardware whenever their functionality is identical.

1 Check the status LEDs on DTI cards.

For normal operation, only the ACT LED is lit. (The LED on the QPC720 PRI is green; the LED on the QPC472 is red.) Note if any other LED is lit and continue with the status check.



553-1340

2 Check the status of all DTIs:

LD 60
STAT (L)

sample response:

DTI TRK LOOP L: ENBL
FFMT/LCMT/YALM: ESF/B8ZS/FDL
SERVICE RESTORE: YES
YELLOW ALARM PROCESS: YES
ALARM STATUS: NO ALARM
CH 1 IDLE DID
CH 2 BUSY TIE
.
.
CH 24

3 List DTI alarm counters:

LD 60
LCNT (L)

Check the out of service
counters to determine the
number of out of service
occurrences since last execution
of the midnight routines.

sample response:

BVP xxxx
SLIPD xxxx
SLIPR xxxx
CRC xxxx
LOSFA xxxx
OS_BVP xxxx
OS_LOSF xxxx
OS_YEL xxxx

Red alarm (local alarm)

A DTI red alarm (local alarm) can indicate the following:

- T1 transmission problems
- a disabled DTI
- a faulty DTI card

Under any of these alarm conditions, all 24 channels are taken out of service as follows:

- 1 Meridian 1 software checks every 15 minutes to see if a Clock Controller or reference clock error has occurred. If the DTI in red alarm (local alarm) was a primary clock source, the software switches the Clock Controller to the secondary reference.
- 2 The DTI red alarm (local alarm) faceplate LED is lit.
- 3 Calls on the DTI are force disconnected.
- 4 The DTI card and all 24 channels are disabled.
- 5 After a pause of 2.5 seconds, the DTI sends a yellow alarm (remote alarm) signal to the far end.
- 6 Software sends the appropriate DTA error messages to the TTY.

Channel Restoration When the alarm condition improves, the DTI is restored to service as follows:

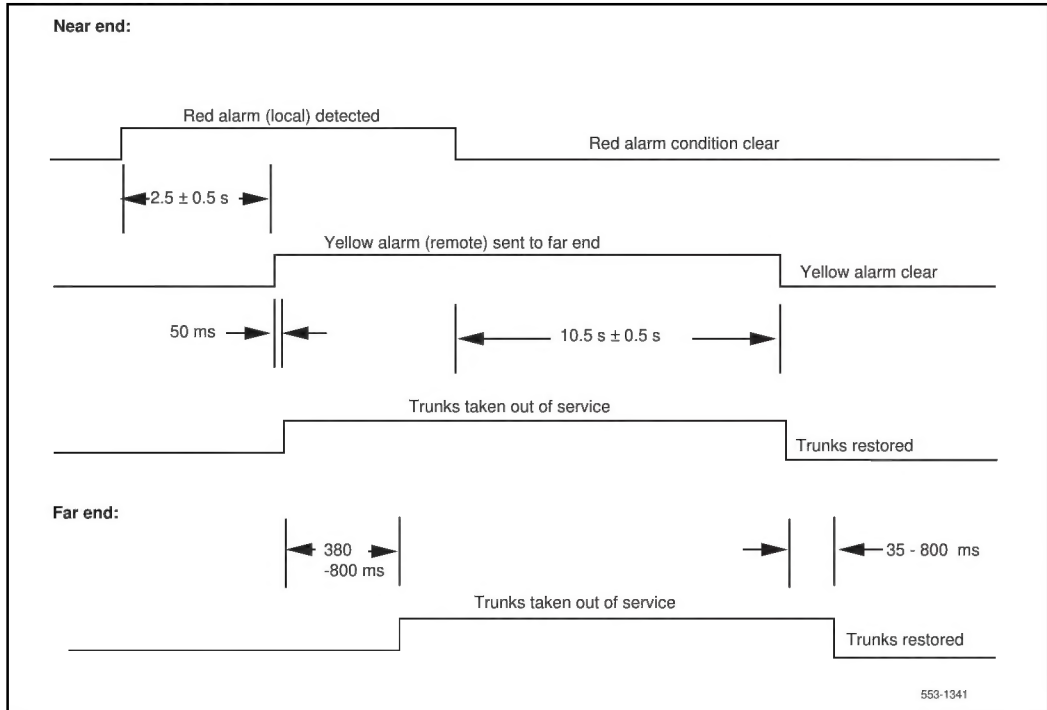
- 1 Red alarm (local alarm) is cleared.
- 2 After 10.5 ± 0.3 seconds, the DTI stops sending a yellow alarm (remote alarm) pattern to the far end.
- 3 All channels but TIE trunks are placed into the idle state and made available for calls.

TIE trunks are made to match the state of the far end (as presented by the T1 port).

- 4 Software sends the appropriate DTA error messages to the TTY.

Figure 1 shows the time relationship between the red and yellow alarms at the local and far end DTIs.

Figure 1
DTI alarm timers



When a red alarm occurs

- 1 Check DTI status:
LD 60
STAT (L)
- 2 Check DTI alarm counters:
LD 60
LCNT (L)
- 3 See the chapter on DTI problems.

Yellow alarm (remote alarm)

A yellow alarm (remote alarm) on the Meridian 1 indicates a problem at the far end (the remote end). The fact that the DTI is receiving the yellow alarm pattern indicates that there is a T1 connection, but the far end is not ready.

Note: For the Computer-to-PBX (CPI) application, yellow alarm (remote alarm) recognition and transmission are disabled in the DTI and are not provided at the host computer interface.

When the DTI receives the yellow alarm (remote alarm) signal from the far end, all 24 channels are disabled.

Channel Restoration When the DTI stops receiving the yellow alarm (remote alarm), the channels that were previously enabled and idle are returned to the idle state.

Each time a yellow alarm (remote alarm) is generated, a counter is incremented. When the yellow alarm 24-hour threshold (prompt RALM in LD 73) is reached, the DTI can only be restored to service manually.

When a yellow alarm occurs

- 1 Do a status check.
- 2 Contact far end personnel to determine what action they are taking.

When the yellow alarm (remote alarm) 24-hour threshold is reached (DTA006 is printed) do the following:

- 1 Contact far end personnel to determine what action they are taking.
- 2 When the far end troubles are cleared, reset the alarm counters and disable, then enable the DTI card. To do this, use the following:

LD 60
DISL L
ENLL L

DTI problems

The DTI can have any of the following problems. Determine the cause of the problem and follow the recommended actions provided in Table 2.

Table 2
DTI problem solving

Symptom	Action
No connection to far end. If the T1 cable is not physically connected to the far end, frame alignment errors occur. The channels will be disabled, but the DTI will be in red alarm (local alarm) mode.	Use the Error Counter to verify the T1 transmission from the DTI faceplate (RCV and XMT) to each connection (cross-connect, LD-1 repeater, CSU, and such equipment).
DTI fails self-test.	Replace the DTI card.
Far end problems, usually indicated by a yellow alarm (remote alarm).	Do a DTI status check and contact personnel at the far end.
DTI T1 is connected but getting bit rate or frame errors. This can be caused by the following: — a bad T1 cable connection — electrical interference — carrier problems (for example, defective repeater or cross talk)	Use the Error Counter to verify the T1 transmission from the DTI faceplate (RCV and XMT) to each connection (cross-connect, LD-1 repeater, CSU, and such equipment).